

2020 Northern California Earthquake Hazards Workshop
January 28-29, 2020
USGS, Menlo Park, California

AGENDA

Tuesday, January 28

9:00-9:15 a.m. Welcoming Remarks

Steve Hickman, Earthquake Science Center Director (USGS)
Keith Knudsen, Northern California Earthquake Hazards Coordinator (USGS)
Sarah Minson, Workshop Overview (USGS)

9:15-10:30 a.m. The 1989 Loma Prieta earthquake: 30th-ish anniversary

Speakers:

Steve Hickman (USGS) *Advances in Earthquake Science, Monitoring & Hazard Assessments Since Loma Prieta* [20 min]

Chris Poland (Consulting Engineer) *Technical Advances and Remaining Challenges Since Loma Prieta* [40 min]

Discussion: 15 min

Moderator: **Carol Prentice** (USGS)

10:30-10:45 a.m. Break

10:45 a.m.-12:00 p.m. Fault complexity: lessons from Ridgecrest

Speakers [20 min each]:

Ken Hudnut (USGS) *Cross-Fault Interaction in the July 2019 Ridgecrest Earthquake Sequence, Southern California: What did we see in the field, from imagery & GPS data prior to the M7.1?*

Julian Lozos (CSU Northridge) *Dynamic Rupture Simulations of the July 2019 Ridgecrest Earthquakes and Implications for Other Cross Faults*

David Schwartz (USGS) *Conjugate Faulting: Potential Occurrence and Implications for the Bay Area and Northern California*

Discussion: 15 min

Moderator: **Tim Dawson** (CGS)

12:00-1:15 p.m. Lunch + Poster Session

1:15 p.m.-2:15 p.m. Lightning Talks: Everything You Want to Know About Current Earthquake Research in Northern California in Less than an Hour!

Moderator: Sarah Minson (USGS) [1 slide and 3 min per speaker]

2:15-3:15 p.m. Posters

3:15-4:30 p.m. ShakeAlert earthquake early warning roll-out

Speakers [20 min each]:

Jessie Saunders (USGS) *Examining regional EEW alerting strategies through the lens of the Ridgecrest earthquakes*

Sara McBride (USGS) *Failure to alert? Exploring perceptions of ShakeAlert during the 2019 Ridgecrest Earthquake Sequence*

Jill Barnes (LAUSD) *ShakeAlert and Disaster Readiness in LAUSD*

Discussion: 15 min

Moderator: **Jen Andrews** (Caltech)

4:30 p.m. Adjourn day 1

Welcome to the U.S. Geological Survey.

We serve the Nation by providing reliable scientific information. The USGS strives to provide a diverse, inclusive, and respectful environment because it is essential to the integrity of our organization and our science. If anything fails to exemplify these ideals,

Wednesday, January 29

9:00-10:15 a.m. **Liquefaction**

Speakers [20 min each]:

Laurie Baise (Tufts) *A Geospatial Approach to Mapping Liquefaction after Earthquakes*

Renmin Pretell (UCD) *Numerical modeling of ground deformations at Balboa Blvd. in the 1994 Northridge Earthquake*

Scott Brandenburg (UCLA) *Seismic Risk to the Sacramento – San Joaquin Delta Levee System*

Discussion: 15 min

Moderator: **Alex Grant** (USGS)

10:15-10:25 a.m. **Break**

10:25-11:25 a.m. **Celebrating the life and career of Paul Spudich**

Speakers:

Ralph Archuleta (UC Santa Barbara) [20 min]

Norm Abrahamson (UC Berkeley) [10 min]

Joe Fletcher (USGS) [10 min]

Marcia McNutt (National Academy of Sciences) [10 min]

Remembrances: 10 min

Moderator: **Tom Hanks** (USGS)

11:25-1:00 p.m. **Lunch + Poster Session**

Special focus: Guiding future research on hazard and risk uncertainty

1:00-1:10 p.m. **Keith Knudsen** (USGS) *Introduction* [10 min]

1:10-2:05 p.m. **What we don't know about seismic sources**

Speakers [15 min each]:

Judy Zachariassen (CGS) *Locations and activities - research suggestions to improve the Quaternary fault and fold database in California?*

Tim Dawson (CGS) *Uncertainties in geologic data used in UCERF*

Chris Madugo (PGE) *Faulting at Gas Transmission Lines: Ongoing Activities and Research Priorities to Characterize Displacement Hazard and Manage Risk in Northern California*

Discussion: 10 min

Moderator: **Belle Philibosian** (USGS)

2:05-3:00 p.m. **What we don't know about shaking**

Speakers [15 min each]:

Patricia Thomas (LCI) *Evaluating Earthquake Hazards in Northern California: What Really Matters and What Doesn't*

Evan Hirakawa (USGS) *Multiple scales of uncertainty in the USGS Bay Area Velocity Model*

Grace Parker (USGS) *Knowns and unknowns in seismic site response: controls and coupling*

Discussion: 10 min

Moderator: **Austin Elliott** (USGS)

3:00-3:10 p.m. **Break**

3:10-4:05 p.m. **What we don't know about risk**

Speakers [15 min each]:

Delphine Fitzenz (RMS) *Comparative risk in Northern California using the reference of the earthquake-induced flooding in the Sacramento Delta*

Yajie Lee (ImageCat) *The Impact of Hazard Models on Risk Assessments – Unintended Consequences? - Lessons from Real-World Examples*

Ned Field (USGS) *Assessing the Value of Removing Earthquake-Hazard-Related Epistemic Uncertainties in California*

Discussion: 10 min

Moderator: **Keith Knudsen** (USGS)

4:05 p.m. Concluding Remarks, Keith Knudsen